

REMARKS

It is believed that the Abstract now satisfies the requirements.

The examiner has rejected claims 12-15 as anticipated by the three Keisuke et al. patents. The examiner has also rejected claims 14 and 15 under 35 USC § 103 as being unpatentable over the Keisuke et al. patents. Favorable reconsideration of the examiner's position is solicited.

The examiner will note that claim 12 has been amended by converting all of its parts to product-by-process form. The pages from the CAS registry submitted in applicants' previous amendment clearly support the position that the compositions here claimed are specific mixtures of esters. Thus, the claimed subject matter (mixtures) can not be anticipated by the references, which disclose only components of the mixture.

Attached to this amendment are comparative examples which were submitted in the parallel European patent application. Two esters prepared according to the application were compared to cyclohexane-dicarboxylic acid esters having linear alkyl chains. In contrast to the esters according to the present invention, these esters are pure compounds since no mixtures result in the preparation process using linear alcohols.

It is urged that the application is in condition to be allowed. Favorable action is solicited.

Please charge any shortage in fees due in connection with the filing of this

BRUNNER et al., Serial No. 09/879,456

paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read 'H B Keil', is written over the printed name.

Herbert B. Keil  
Reg. No. 18,967

1350 Connecticut Ave., N.W.  
Washington, D.C. 20036  
(202)659-0100

HBK/kas

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS**

Amend claim 12 as follows:

12. (twice amended) A dicarboxylic acid diester selected from the group consisting of  
cyclohexane-1,2-dicarboxylic acid di(isopentyl) ester, obtained by the process of hydrogenation of a di(isopentyl)phthalate having the Chemical Abstracts registry number (in the following: CAS No.) 84777-06-0;  
cyclohexane-1,2-dicarboxylic acid di(isoheptyl) ester,  
[obtainable] obtained by hydrogenating the di(isoheptyl)phthalate having the CAS No. 71888-89-6;  
cyclohexane-1,2-dicarboxylic acid di(isononyl) ester,  
[obtainable] obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 68515-48-0;  
cyclohexane-1,2-dicarboxylic acid di(isononyl) ester,  
[obtainable] obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 28553-12-0, based on n-butene;  
cyclohexane-1,2-dicarboxylic acid di(isononyl) ester,  
[obtainable] obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 28553-12-0, based on isobutene;  
a 1,2-di-C<sub>6</sub>-ester of cyclohexanedicarboxylic acid, [obtainable]

obtained by hydrogenating the di(hexyl)phthalate having the CAS No. 68515-46-8;

cyclohexane-1,2-dicarboxylic acid di(isodecyl) ester,

[obtainable] obtained by hydrogenating a di(isodecyl)phthalate having the CAS No. 68515-49-1;

1,2-di-C<sub>7-11</sub>-ester of cyclohexanedicarboxylic acid, [obtainable] obtained by hydrogenating the corresponding phthalic acid ester having the CAS No. 68515-42-4;

1,2-di-C<sub>7-11</sub>-ester of cyclohexanedicarboxylic acid, [obtainable] obtained by hydrogenating the di-C<sub>7-11</sub>-phthalates having the following CAS Nos.: 111381-89-6, 111381-90-9, 111381-91-0, 68515-44-6, 68515-45-7 and 3648-20-7;

a 1,2-di-C<sub>9-11</sub>-ester of cyclohexanedicarboxylic acid, [obtainable] obtained by hydrogenating a di-C<sub>9-11</sub>-phthalate having the CAS No. 98515-43-5;

a 1,2-di(isodecyl)cyclohexanedicarboxylic acid ester, [obtainable] obtained by hydrogenating a di(isodecyl)phthalate, consisting essentially of di-(2-propylheptyl)phthalate; and

a 1,2-di-C<sub>7-9</sub>-cyclohexanedicarboxylic acid ester, [obtainable] obtained by hydrogenating the corresponding phthalic acid ester, which comprises branched and linear C<sub>7-9</sub>-alkylester groups.

IN THE ABSTRACT

Cancel the present abstract and replace with:

--

Abstract

A process for producing plasticizers in which a phthalic acid having the CAS Nos. 111381-89-6, 111381-90-9, 111381-91-0, 68515-44-6, 68515-45-7 and 3648-20-7, the formed plasticizers and a method of increasing the plasticity of a plastic product.--

**COPY OF ALL CLAIMS**

12. (twice amended) A dicarboxylic acid diester selected from the group consisting of

cyclohexane-1,2-dicarboxylic acid di(isopentyl) ester, obtained by the process of hydrogenation of a di(isopentyl)phthalate having the Chemical Abstracts registry number (in the following: CAS No.) 84777-06-0;

cyclohexane-1,2-dicarboxylic acid di(isoheptyl) ester, obtained by hydrogenating the di(isoheptyl)phthalate having the CAS No. 71888-89-6;

cyclohexane-1,2-dicarboxylic acid di(isononyl) ester, obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 68515-48-0;

cyclohexane-1,2-dicarboxylic acid di(isononyl) ester, obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 28553-12-0, based on n-butene;

cyclohexane-1,2-dicarboxylic acid di(isononyl) ester, obtained by hydrogenating the di(isononyl)phthalate having the CAS No. 28553-12-0, based on isobutene;

a 1,2-di-C<sub>6</sub>-ester of cyclohexanedicarboxylic acid, obtained by hydrogenating the di(hexyl)phthalate having the CAS No. 68515-46-8;

cyclohexane-1,2-dicarboxylic acid di(isodecyl) ester, obtained by hydrogenating a di(isodecyl)phthalate having the CAS No. 68515-49-1;

1,2-di-C<sub>7-11</sub>-ester of cyclohexanedicarboxylic acid, obtained by hydrogenating the corresponding phthalic acid ester having the CAS No. 68515-42-4;

1,2-di-C<sub>7-11</sub>-ester of cyclohexanedicarboxylic acid, obtained by hydrogenating the di-C<sub>7-11</sub>-phthalates having the following CAS Nos.: 111381-89-6, 111381-90-9, 111381-91-0, 68515-44-6, 68515-45-7 and 3648-20-7;

a 1,2-di-C<sub>9-11</sub>-ester of cyclohexanedicarboxylic acid, obtained by hydrogenating a di-C<sub>9-11</sub>-phthalate having the CAS No. 98515-43-5;

a 1,2-di(isodecyl)cyclohexanedicarboxylic acid ester, obtained by hydrogenating a di(isodecyl)phthalate, consisting essentially of di-(2-propylheptyl)phthalate; and

a 1,2-di-C<sub>7-9</sub>-cyclohexanedicarboxylic acid ester, obtained by hydrogenating the corresponding phthalic acid ester, which comprises branched and linear C<sub>7-9</sub>-alkylester groups.

13. The 1,2-di-C<sub>7-9</sub>-cyclohexanedicarboxylic acid ester of claim 12 which is obtained by hydrogenating a phthalic acid ester selected from the group of di-C<sub>7,9</sub>-alkylphthalate having the CAS No. 111 381-89-6;

di-C<sub>7</sub>-alkylphthalate having the CAS No. 68515-44-6; and

di-C<sub>9</sub>-alkylphthalate having the CAS No. 68515-45-7.

14. A method of increasing the plasticity of a plastic product which comprises admixing to the plastic a plasticizing amount of at least one of the dicarboxylic acid diesters defined in claim 12.

15. A plastic product comprising a plasticizing amount of at least one of the dicarboxylic acid diesters defined in claim 12.

16. The method of claim 14, wherein said plastic product is PVB.